

Additionally, CGIA and DCM performed a review of potential data sources during a pilot study conducted in 2006. An updated review is provided below.

- NAIP Imagery - Leaf-on imagery acquired at 1-meter resolution. While the 2006 NAIP flyover provides current imagery for the 20 coastal counties, it does not provide a high degree of horizontal accuracy because the resolution is 1-meter. DCM's ESWG addressed imagery acquisition and minimum NAIP imagery standards were discussed. Based on this discussion, participating state agencies should provide adequate funding for NAIP imagery to be flown for the coastal area at a resolution of 2-foot or higher.
- Research Satellite Aperture Radar (SAR) – SAR datasets are not readily available along NC's estuarine environment and are probably too expensive to acquire as a practical source for delineating the land/water or vegetation/water interface. If SAR datasets were readily accessible, this source could be useful in identifying interfaces over a large area. Another concern is that resolution for these datasets may not be sufficient.
- 2003 Post-Hurricane Isabel Orthophotography – This 2-foot resolution, black and white dataset is consistent for the study area. This is the most consistent source of imagery across the study area.
- County Orthophotos – Color county orthophotos available to DCM cover all 20 coastal counties. Time periods and resolutions vary from county to county but are as recent as 2007 with as high as 6-inch resolutions.
- ASTER Satellite Imagery – This imagery has 15-meter resolution and is potentially useful for land-cover analysis but not shoreline delineation.
- LIDAR – LIDAR datasets are not suitable for the DCM estuarine shoreline mapping project because of difficulties associated with processing the dataset.
- SAV Mapping Imagery – This color, multispectral, 1-meter dataset is low tide coordinated, but does not cover the entire study area. This imagery was flown in pieces over the course of one year.

### ***III b.2. DCM Criteria for the ESMP***

The following represents a list of the criteria DCM requires for the ESMP based on available imagery (Table 1).

1. DCM's primary concern is that the ESMP employ the most recent dataset available for areas where the shoreline is to be delineated.
2. A secondary component is that the dataset used for the ESMP needs to have the highest possible resolution so that shoreline type characteristics and hardened structures can be easily identified and defined during the digitizing process. DCM believes that a higher degree of imagery resolution will allow for increased accuracy when delineating the estuarine shoreline and will translate into a higher degree of confidence for agencies using the shoreline on a daily basis. While there are other important considerations at hand, the issue of imagery resolution is essential to the success of the ESMP.